

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1 1. A wrap-around article carrier for carrying a plurality of articles
2 comprising:

3 (a) a top panel, opposite side panels and a bottom panel consisting
4 of an inner flap with a terminal edge and an outer flap with a terminal edge, with a
5 portion of the outer flap overlapping a portion of the inner flap;

6 (b) said inner flap having at least one primary lock ledge formed
7 by a primary female opening in the inner flap, the outer flap having a primary male
8 lock for each lock ledge which is formed by a slit cut in the outer flap; and

9 (c) said outer flap having at least one secondary male lock with
10 two shoulders attached by a neck to the terminal edge of said flap, and said inner flap
11 having a secondary female opening for each secondary male lock, said secondary
12 female opening being further from the terminal edge of the inner flap than the primary
13 female opening, with each secondary female opening formed by a secondary cut line
14 and fold line which is closer to the terminal edge of the inner flap than the cut line,
15 said fold line having a center and two ends with the secondary cut line at least nearly
16 meeting the fold line at each end of the fold line, said secondary cut line having a
17 center that is significantly further from the terminal edge of the inner flap than the rest
18 of said cut line, said secondary cut line and fold line forming a female flap in the
19 secondary female opening with the fold line projecting towards the terminal edge of
20 the inner flap from the ends of the fold line to the center, said secondary cut line
21 extending beyond each end of the fold line to form a secondary locking ledge along
22 the side of said extension cut remote from the terminal edge of the inner flap.

1 2. The wrap-around carrier of claim 1, in which said extension cut turns
2 and projects towards the terminal edge of the inner flap at a point remote from each
3 end of the fold line.

1 3. The wrap-around carrier of claim 1, in which each secondary female
2 opening has a slit that extends for a short distance from the secondary cut line near
3 each end of the fold line in a direction away from the terminal edge of the inner flap.

1 4. The wrap-around carrier of claim 3, in which the neck of each
2 secondary male lock has two edges, with the distance between the edges of the neck
3 being less than the distance between the slits, with the neck of the secondary male
4 lock being designed to be located in the secondary female opening between the slits.
5

1 5. The wrap-around carrier of claim 1, which has been loaded with
2 articles and each primary male lock is engaged with a lock ledge formed by a primary
3 female opening, and the shoulder of each secondary male lock is engaged with a
4 secondary locking ledge, thereby securing the articles in the carrier.

1 6. A wrap-around article carrier for carrying a plurality of articles
2 comprising:

3 (a) a top panel, opposite side panels and a bottom panel consisting
4 of an inner flap with a terminal edge and an outer flap with a terminal edge with a
5 portion of the outer flap overlapping a portion of the inner flap;

6 (b) said inner flap having at least one primary lock ledge formed
7 by a primary female opening in the inner flap, the outer flap having a primary male
8 lock for each lock ledge which is formed by a slit cut in the outer flap; and

9 (c) said outer flap having at least one secondary male lock with
10 two shoulders attached by a neck to the terminal edge of said flap, and said inner flap
11 having a secondary female opening for each secondary male lock, said secondary
12 female opening being further from the terminal edge of the inner flap than the primary
13 female opening, with each secondary female opening formed by a secondary cut line
14 and fold line which is closer to the terminal edge of the inner flap than the cut line,
15 said fold line being arcuate shaped and having a center and two ends with the center
16 being closer to the terminal edge of the inner flap than the ends of the fold line, said
17 secondary cut line meeting the fold line at each end of the fold line, said secondary
18 cut line being V shaped with the apex of the V being further from the terminal edge of
19 the inner flap than the rest of the cut line, said secondary cut line and fold line
20 forming a female flap in the secondary female opening, said secondary cut line

1 extending beyond each end of the fold line to form a secondary locking ledge along
2 the side of said extension cut remote from the terminal edge of the inner flap.

1 7. The wrap-around carrier of claim 6, which has been loaded with
2 articles and each primary male lock is engaged with a lock ledge formed by a primary
3 female opening, and the shoulder of each secondary male lock is engaged with a
4 secondary locking ledge, thereby securing the articles in the carrier.

1 8. The wrap-around carrier of claim 6, in which said extension cut turns
2 and projects towards the terminal edge of the inner flap at a point remote from each
3 end of the fold line.

1 9. The wrap-around carrier loaded with a plurality of articles of claim 7,
2 in which each secondary female opening has a slit that extends for a short distance
3 from the secondary cut line near each end of the fold line in a direction away from the
4 terminal edge of the inner flap.

1 10. The wrap-around carrier loaded with a plurality of articles of claim 9,
2 in which the neck of each secondary male lock has two edges, with the distance
3 between the edges of the neck being less than the distance between the slits, with the
4 neck of the secondary male lock being designed to be located in the secondary female
5 opening between the slits.
6

1 11. A blank for forming a wrap-around carrier for carrying a plurality of
2 containers comprising:

3 (a) a top panel, opposite side panels and a bottom panel consisting
4 of an inner flap with a terminal edge and an outer flap with a terminal edge;

5 (b) said inner flap having at least one primary lock ledge formed
6 by a primary female opening in the inner flap, the outer flap having a primary male
7 lock for each lock ledge which is formed by a slit cut in the outer flap; and

8 (c) said outer flap having at least one secondary male lock with
9 two shoulders attached by a neck to the terminal edge of said flap, and said inner flap
10 having a secondary female opening for each secondary male lock, said secondary
11 female opening being further from the terminal edge of the inner flap than the primary

12 female opening, with each secondary female opening formed by a secondary cut line
 13 and fold line which is closer to the terminal edge of the inner flap than the cut line,
 14 said fold line having a center and two ends with the secondary cut line at least nearly
 15 meeting the fold line at each end of the fold line, said secondary cut line having a
 16 center that is significantly further from the terminal edge of the inner flap than the rest
 17 of said cut line, said secondary cut line and fold line forming a female flap in the
 18 secondary female opening with the fold line projecting towards the terminal edge of
 19 the inner flap from the ends of the fold line to the center, said secondary cut line
 20 extending beyond each end of the fold line to form a secondary locking ledge along
 21 the side of said extension cut remote from the terminal edge of the inner flap.

1 12. The wrap-around carrier of claim 1, for carrying a plurality of
 2 containers in two rows, said carrier having at least two sets of :
 3 (a) a primary male lock and corresponding primary lock ledge; and
 4 (b) a secondary male lock and two secondary locking ledges.

1 13. The wrap-around carrier of claim 6, for carrying a plurality of
 2 containers in two rows, said carrier having at least two sets of :
 3 (a) a primary male lock and corresponding primary lock ledge; and
 4 (b) a secondary male lock and two secondary locking ledges.

1 14. The wrap-around carrier of claim 1, for carrying a plurality of
 2 containers in one row.

1 15. The wrap-around carrier of claim 6, for carrying a plurality of
 2 containers in one row.

1 16. A wrap-around carrier loaded with a plurality of containers in two
 2 rows, said carrier comprising:
 3 (a) a top panel, opposite side panels and a bottom panel consisting
 4 of an inner flap with a terminal edge and an outer flap with a terminal edge, with a
 5 portion of the outer flap overlapping a portion of the inner flap;
 6 (b) said inner flap having at least two primary lock ledges, with
 7 each ledge formed by a primary female opening in the inner flap, the outer flap having

8 a primary male lock for each lock ledge which is formed by a slit cut in the outer flap,
 9 with each primary male lock being engaged with a primary locking ledge, with each
 10 primary male lock being at least substantially flat against said inner flap; and

11 (c) said outer flap having at least two secondary male locks, with
 12 each secondary male lock attached by a neck to the terminal edge of said flap, and
 13 said inner flap having a secondary female opening for each secondary male lock, said
 14 secondary female opening being further from the terminal edge of the inner flap than
 15 the primary female opening, with each secondary female opening formed by a
 16 secondary cut line and fold line which is closer to the terminal edge of the inner flap
 17 than the cut line, said fold line having a center and two ends with the secondary cut
 18 line at least nearly meeting the fold line at each end of the fold line, said secondary
 19 cut line having a center that is significantly further from the terminal edge of the inner
 20 flap than the rest of said cut line, said secondary cut line and fold line forming a
 21 female flap in the secondary female opening with the fold line projecting towards the
 22 terminal edge of the inner flap from the ends of the fold line to the center, said
 23 secondary cut line extending beyond each end of the fold line to form a secondary
 24 locking ledge along the side of said extension cut remote from the terminal edge of
 25 the inner flap, with each secondary male lock extending through a secondary female
 26 opening with each shoulder of each secondary male lock engaging a secondary
 27 locking ledge, with each secondary male lock being at least substantially flat against
 28 said inner flap of the carrier.

1 17. The wrap-around carrier loaded with a plurality of containers in two
 2 rows of claim 16, in which said extension cut turns and projects towards the terminal
 3 edge of the inner flap at a point remote from each end of the fold line.

1 18. The wrap-around carrier loaded with a plurality of containers in two
 2 rows of claim 16, in which each secondary female opening has a slit that extends for a
 3 short distance from the secondary cut line near each end of the fold line in a direction
 4 away from the terminal edge of the inner flap.

1 19. The wrap-around carrier loaded with containers of two rows of claim
 2 18, in which the neck of each secondary male lock has two edges, with the distance
 3 between the edges of the neck being less than the distance between the slits, with the

neck of the secondary male lock being designed to be located in the secondary female opening between the slits.

20. The wrap-around carrier of claim 16, in which the containers are cans.

21. The wrap-around carrier of claim 16, in which the containers are bottles.

22. A wrap-around carrier loaded with a plurality of containers in one row, said carrier comprising:

(a) a top panel, opposite side panels and a bottom panel consisting of an inner flap with a terminal edge and an outer flap with a terminal edge with a portion of the outer flap overlapping a portion of the inner flap;

(b) said inner flap having at least two primary lock ledges, with each ledge formed by a primary female opening in the inner flap, the outer flap having a primary male lock for each lock ledge which is formed by a slit cut in the outer flap, with each primary male lock being engaged with a primary locking ledge, with each primary male lock being at least substantially flat against the inner flap; and

(c) said outer flap having at least two secondary male locks, with each secondary male lock attached by a neck to the terminal edge of said flap, and said inner flap having a secondary female opening for each secondary male lock, said secondary female opening being further from the terminal edge of the inner flap than the primary female opening, with each secondary female opening formed by a secondary cut line and fold line which is closer to the terminal edge of the inner flap than the cut line, said fold line having a center and two ends with the secondary cut line at least nearly meeting the fold line at each end of the fold line, said secondary cut line having a center that is significantly further from the terminal edge of the inner flap than the rest of said cut line, said secondary cut line and fold line forming a female flap in the secondary female opening with the fold line projecting towards the terminal edge of the inner flap from the ends of the fold line to the center, said secondary cut line extending beyond each end of the fold line to form a secondary locking ledge along the side of said extension cut remote from the terminal edge of the inner flap, with each secondary male lock extending through a secondary female opening with each shoulder of each secondary male lock engaging a secondary

locking ledge, with each secondary male lock being at least substantially flat against said inner flap of the carrier.

23. The wrap-around carrier loaded with a plurality of containers in one row of claim 22, in which said extension cut turns and projects towards the terminal edge of the inner flap at a point remote from each end of the fold line.

24. The wrap-around carrier loaded with a plurality of containers in one row of claim 22, in which a slit extends for a short distance from the secondary cut line near each end of the fold line in a direction away from the terminal edge of the inner flap.

25. A wrap-around carrier loaded with at least four cans in two rows, said carrier comprising:

(a) a top panel, opposite side panels and a bottom panel consisting of an inner flap with a terminal edge and an outer flap with a terminal edge, with a portion of the outer flap overlapping a portion of the inner flap;

(b) said inner flap having at least two primary locking ledges, with each ledge formed by a primary female opening in the inner flap, the outer flap having a primary male lock for each lock ledge which is formed by a slit cut in the outer flap, with each primary lock being engaged with a primary locking ledge with each primary male lock being at least substantially flat against the inner flap;

(c) said outer flap having at least two secondary male locks with each secondary male lock attached by a neck to the terminal edge of said flap, and said inner flap having a secondary female opening for each secondary male lock, said secondary female opening being further from the terminal edge of the inner flap than the primary female opening with each secondary female opening formed by a secondary cut line and fold line which is closer to the terminal edge of the inner flap than the cut line, said fold line having a center and two ends with the secondary cut line at least nearly meeting the fold line at each end of the fold line, said secondary cut line having a center that is significantly further from the terminal edge of the inner flap than the rest of said cut line, said secondary cut line and fold line forming a female flap in the secondary female opening with the fold line projecting towards the terminal edge of the inner flap from the ends of the fold line to the center, said

23 secondary cut line extending beyond each end of the fold line to form a secondary
24 locking ledge along the side of said extension cut remote from the terminal edge of
25 the inner flap, with each secondary male lock extending through a secondary female
26 opening with each shoulder of each secondary male lock engaging a secondary
27 locking ledge, with each secondary male lock being at least substantially flat against
28 said inner flap of the carrier.

1 26. The wrap-around carrier loaded with at least four cans in two rows of
2 claim 25, in which said extension cut turns and projects towards the terminal edge of
3 the inner flap at a point remote from each end of the fold line.

1 27. The wrap-around carrier loaded with at least four cans in two rows of
2 claim 25, in which a slit extends for a short distance from the secondary cut line near
3 each end of the fold line in a direction away from the terminal edge of the inner flap.

1 28. A wrap-around carrier loaded with at least four bottles in two rows said
2 carrier comprising:

3 (a) a top panel, opposite side panels and a bottom panel consisting
4 of an inner flap with a terminal edge and an outer flap with a terminal edge, with a
5 portion of the outer flap overlapping a portion of the inner flap;

6 (b) said inner flap having at least two primary locking ledges, with
7 each ledge formed by a primary female opening in the inner flap, the outer flap having
8 a primary male lock for each lock ledge which is formed by a slit cut in the outer flap
9 with each primary lock being engaged with a primary locking ledge, with each
10 primary male lock being at least substantially flat against the inner flap; and

11 (c) said outer flap having at least two secondary male locks with
12 each secondary male lock attached by a neck to the terminal edge of said flap, and
13 said inner flap having a secondary female opening for each secondary male lock, said
14 secondary female opening being further from the terminal edge of the inner flap than
15 the primary female opening, with each secondary female opening formed by a
16 secondary cut line and fold line which is closer to the terminal edge of the inner flap
17 than the cut line, said fold line having a center and two ends with the secondary cut
18 line at least nearly meeting the fold line at each end of the fold line, said secondary
19 cut line having a center that is significantly further from the terminal edge of the inner
20 flap than the rest of said cut line, said secondary cut line and fold line forming a
21 female flap in the secondary female opening with the fold line projecting towards the
22 terminal edge of the inner flap from the ends of the fold line to the center, said
23 secondary cut line extending beyond each end of the fold line to form a secondary
24 locking ledge along the side of said extension cut remote from the terminal edge of
25 the inner flap, with each secondary male lock extending through a secondary female
26 opening with each shoulder of each secondary male lock engaging a secondary
27 locking ledge, with each secondary male lock being at least substantially flat against
28 said inner flap of the carrier.

1 29. The wrap-around carrier loaded with at least four bottles in two rows
2 of claim 28, in which said extension cut turns and projects towards the terminal edge
3 of the inner flap at a point remote from each end of the fold line.

1 30. The wrap-around carrier loaded with at least four bottles in two rows
2 of claim 28, in which a slit extends for a short distance from the secondary cut line
3 near each end of the fold line in a direction away from the terminal edge of the inner
4 flap.

1 31. An interlocking panel in an article carrier, said interlocking panel
2 being connected to opposite side panels of the carrier, said interlocking panel
3 comprising:

4 (a) inner and outer flaps which are connected to the side panels of
5 the carrier, said inner and outer flaps each having a terminal edge, with a portion of
6 the outer flap overlapping a portion of the inner flap;

7 (b) said inner flap having at least one primary lock ledge formed
8 by a primary female opening in the inner flap, the outer flap having a primary male
9 lock for each lock ledge which is formed by a slit cut in the outer flap; and

10 (c) said outer flap having at least one secondary male lock with
11 two shoulders attached by a neck to the terminal edge of said flap, and said inner flap
12 having a secondary female opening for each secondary male lock, said secondary
13 female opening being further from the terminal edge of the inner flap than the primary
14 female opening, with each secondary female opening formed by a secondary cut line
15 and fold line which is closer to the terminal edge of the inner flap than the cut line,
16 said fold line having a center and two ends with the secondary cut line at least nearly
17 meeting the fold line at each end of the fold line, said secondary cut line having a
18 center that is significantly further from the terminal edge of the inner flap than the rest
19 of said cut line, said secondary cut line and fold line forming a female flap in the
20 secondary female opening with the fold line projecting towards the terminal edge of
21 the inner flap from the ends of the fold line to the center, said secondary cut line
22 extending beyond each end of the fold line to form a secondary locking ledge along
23 the side of said extension cut remote from the terminal edge of the inner flap.

1 32. The interlocking panel of claim 28, in which said extension cut turns
2 and projects towards the terminal edge of the inner flap at a point remote from each
3 end of the fold line.

1 33. The interlocking panel of claim 31, in which a slit extends for a short
2 distance from the secondary cut line near each end of the fold line in a direction away
3 from the terminal edge of the inner flap.

1 34. The interlocking panel of claim 31, in which the carrier has been
2 loaded with articles and each primary male lock is engaged with a lock ledge formed
3 by a primary female opening, and the shoulder of each secondary male lock is
4 engaged with a secondary locking ledge, thereby securing the inner and outer flaps
5 together as an interlocking panel.

1 35. An interlocking panel in an article carrier, said interlocking panel
2 being connected to opposite side panels of the carrier, said interlocking panel
3 comprising:

4 (a) inner and outer flaps which are connected to the side panels of
5 the carrier, said inner and outer flaps each having a terminal edge, with a portion of
6 the outer flap overlapping a portion of the inner flap;

7 (b) said inner flap having at least one primary lock ledge formed
8 by a primary female opening in the inner flap, the outer flap having a primary male
9 lock for each lock ledge which is formed by a slit cut in the outer flap; and

10 (c) said outer flap having at least one secondary male lock with
11 two shoulders attached by a neck to the terminal edge of said flap, and said inner flap
12 having a secondary female opening for each secondary male lock, said secondary
13 female opening being further from the terminal edge of the inner flap than the primary
14 female opening, with each secondary female opening formed by a secondary cut line
15 and fold line which is closer to the terminal edge of the inner flap than the cut line,
16 said fold line being arcuate shaped and having a center and two ends with the center
17 being closer to the terminal edge of the inner flap than the ends of the fold line, said
18 secondary cut line meeting the fold line at each end of the fold line, said secondary
19 cut line being V shaped with the apex of the V being further from the terminal edge of
20 the inner flap than the rest of the cut line, said secondary cut line and fold line
21 forming a female flap in the secondary female opening, said secondary cut line
22 extending beyond each end of the fold line to form a secondary locking ledge along
23 the side of said extension cut remote from the terminal edge of the inner flap.

1 36. The interlocking panel of claim 35, in which said extension cut turns
2 and projects towards the terminal edge of the inner flap at a point remote from each
3 end of the fold line.

1 37. The interlocking panel of claim 35, in which a slit extends for a short
2 distance from the secondary cut line near each end of the fold line in a direction away
3 from the terminal edge of the inner flap.

1 38. An interlocking panel in an article carrier, said interlocking panel
2 being connected to opposite side panels of the carrier, said interlocking panel
3 comprising:

4 (a) inner and outer flaps which are connected to the side panels of
5 the carrier, said inner and outer flaps each having a terminal edge;

6 (b) said inner flap having at least two primary lock ledges, with
7 each ledge formed by a primary female opening in the inner flap, the outer flap having
8 a primary male lock for each lock ledge which is formed by a slit cut in the outer flap,
9 with each primary male lock being engaged with a primary lock ledge, with each
10 primary male lock being at least substantially flat against the inner flap; and

11 (c) said outer flap having at least two secondary male locks, with
12 each secondary male lock attached by a neck to the terminal edge of said flap, and
13 said inner flap having a secondary female opening for each secondary male lock, said
14 secondary female opening being further from the terminal edge of the inner flap than
15 the primary female opening, with each secondary female opening formed by a
16 secondary cut line and fold line which is closer to the terminal edge of the inner flap
17 than the cut line, said fold line having a center and two ends with the secondary cut
18 line at least nearly meeting the fold line at each end of the fold line, said secondary
19 cut line having a center that is significantly further from the terminal edge of the inner
20 flap than the rest of said cut line, said secondary cut line and fold line forming a
21 female flap in the secondary female opening with the fold line projecting towards the
22 terminal edge of the inner flap from the ends of the fold line to the center, said
23 secondary cut line extending beyond each end of the fold line to form a secondary
24 locking ledge along the side of said extension cut remote from the terminal edge of
25 the inner flap, with each secondary male lock extending through a secondary female
26 opening with each shoulder of each secondary male lock engaging a secondary

27 locking ledge, with each secondary male lock being at least substantially flat against
28 said inner flap of the carrier.

1 39. The interlocking panel of claim 38, in which said extension cut turns
2 and projects towards the terminal edge of the inner flap at a point remote from each
3 end of the fold line.

1 40. The interlocking panel of claim 38, in which a slit extends for a short
2 distance from the secondary cut line near each end of the fold line in a direction away
3 from the terminal edge of the inner flap.